



## **Conservation Engineering Survey and Assessment Report**

For

## Spirit of Newfoundland (Masonic Temple), Cathedral Street, St. Johns, Newfoundland.

**Client:** Kathie Hicks



Date: 3<sup>rd</sup> July 2018



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Copies of this report have been presented by ACP to:

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## **Glossary of Terms**

**Historic Place** – is a structure, building, group of buildings, district, landscape, archaeological site or other place in Canada that has been formally recognized for its heritage value by an appropriate authority within a jurisdiction.

**Landmark Registered Heritage Structure** – Heritage buildings or engineering works that are the finest and most architecturally and historically significant examples in the province.

**Registered Heritage Structure** – Heritage buildings or engineering works that are good examples of their type in a good state of preservation and that help to tell the story of Newfoundland and Labrador.

**Recognized Heritage Structure or Feature** – Heritage structures and features which do not meet the above criteria, but which help to conserve the heritage of a community, and in particular those which support a heritage district or neighbourhood. In addition to churches, houses and commercial buildings, examples might include sheds, fishing structures, stone walls, root cellars and cemeteries.

**Designation** – Once a building is designated, the owner agrees to maintain the heritage character of the property including the use of historical building materials. Other conditions apply depending on the level of designation which are set out below in the next section.



## **Heritage Foundation Newfoundland and Labrador**

## **Heritage Structure Designation**

The Heritage Foundation of Newfoundland and Labrador (HFNL) designates what it deems to be the best examples of heritage structures in the province – those it finds to be worthy of commemoration and protection. Designation by the Foundation is commemorative only and does not place any particular restrictions on the owner, however, to maintain its heritage status a building must retain its heritage character. Legal owners of heritage properties can apply for designation to HFNL.

There are three categories of designation depending on a structure's historical and architectural significance as determined by a panel of heritage experts:

- 1) Landmark Registered Heritage Structure Heritage buildings or engineering works that are the finest and most architecturally and historically significant examples in the province.
- 2) **Registered Heritage Structure** Heritage buildings or engineering works that are good examples of their type in a good state of preservation and that help to tell the story of Newfoundland and Labrador.
- 3) Recognized Heritage Structure or Feature Heritage structures and features which do not meet the above criteria, but which help to conserve the heritage of a community, and in particular those which support a heritage district or neighbourhood. In addition to churches, houses and commercial buildings, examples might include sheds, fishing structures, stone walls, root cellars and cemeteries. (Note: This classification is currently being piloted in one or more Registered Heritage District. At the present time applications under this category will not be entertained from other communities) Buildings considered for Heritage Designation will generally predate Newfoundland Confederation (1949), however "Modernist Style" structures from the period 1930 1975 are also eligible (for more information on Modernist Architecture click here).

## What Does Designation Mean?

- The property owner agrees to maintain the heritage character of the property including the use of historical building materials.
- The property owner maintains all rights to the building and is able to adapt the building as long as any changes are in keeping with its heritage character and integrity and the owner consults with HFNL.
- The owner becomes eligible for restoration and maintenance grants with amounts being tied to the level of designation. A building must be designated prior to submission of a Heritage Grant application.
- A plaque, owned by HFNL, will be placed on the building that tells of its historical significance.
- The structure is listed on the Provincial and Canadian Register of Historic Places.



## 1.0 Scope of Study

This report has been prepared following a request by the client (Kathie Hicks), to carry out a Conservation Building Assessment of the "Spirit of Newfoundland" building (also known as the St. John's Masonic Temple) located on Cathedral Street in the city of St. John's, Newfoundland. The building is listed as a "Registered Heritage Structure" by the Heritage Foundation of Newfoundland and Labrador.

This report aims to provide the following:

- An assessment on the condition of the building including all accessible building elements at the time of inspection.
- Identify a scope of recommended works categorized in five categories as described in section 4.0 Site and Building Survey and Assessmentbelow.

#### Note:

This is not a comprehensive building/structural survey and should not be taken as such. It must be noted that while minor opening up was carried out on walls, floors etc., that this report is based on a visual inspection only. We can only comment on those items which were both visible and accessible at the time of our inspection.

This report is not suitable for tendering or construction purposes. It is for approval purposes only.

## 1.1 Project Details

## **Scope of works**

Conservation Building inspection of the St. John's Masonic Temple, Cathedral Street, St. John's, Newfoundland.

## 2.0 Method of study

The following methods and resources were used in establishing this Conservation Building Assessment Report.

- The subject site was studied, visited and inspected by a qualified Conservation Building Surveyor and Chartered Building Engineer (Conservation).
- The Canadian Register of Historic Places was studied.
- The listings of the Heritage Foundation of Newfoundland and Labrador were studied.
- Minor opening up works were carried out on site during our inspection in order to assess various building elements and their make-up. All opening up works were carried out under the supervision of the Conservation Building Surveyor.



## 3.0 Existing Environment

The subject structure is located at No. 6 Cathedral Street, St. John's, Newfoundland. The Anglican Cathedral of St. John the Baptist is located at the opposite side of the street. The Masonic Temple building is a 2-storey over basement brick and stone structure. The site is bounded in part by a stone wall and wrought iron railings which predate the building. The entrance steps to the building are made up of the original stone walls and modern concrete steps with steel railings.

The front façade of the building faces South West. It is made up of three no. towers which feature decorative copper fascia and soffits as well as decorative copper panels. A light yellow sandstone is featured extensively being used as window heads, decorative arches and large central columns at either side of the front door.

The building features a decorative concrete string course at first and second floor level which continues around the building.

#### 3.1 Location

Spirit of Newfoundland, Masonic Temple, No. 6 Cathedral Street, St. John's, Newfoundland and Labrador, Canada.

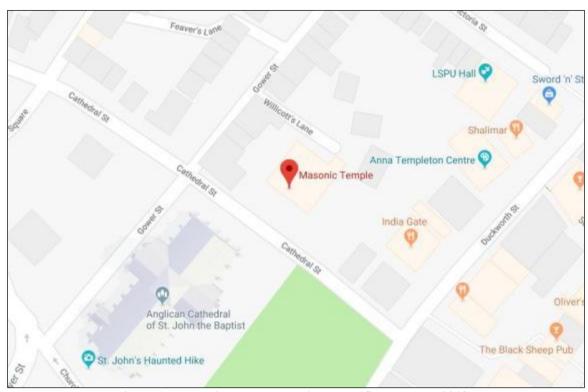


Figure 1 – Masonic Temple Location Map (Google Maps 2018)



#### 3.2 Protection Status

The Masonic Temple building is listed as a *Registered Heritage Structure* by the Heritage Foundation of Newfoundland and Labrador.

## 3.2.1 Heritage Foundation of Newfoundland and Labrador

The Heritage Foundation describes the building as follows:

#### DESCRIPTION

The Masonic Temple is a three storey brick building located at 6 Cathedral Street, St. John's, NL. Built between 1894-1896 and inspired by Classic Revival design, the Masonic Temple is the largest brick fraternal meeting hall in the province. The designation is confined to the footprint of the building.

#### STATEMENT OF SIGNIFICANCE

Formal Recognition Type

Registered Heritage Structure

## Heritage Value

The Masonic Temple was designated a Registered Heritage Structure by the Heritage Foundation of Newfoundland and Labrador in 1995 because of its aesthetic, historic and cultural value. The Masonic Temple has aesthetic value as it is the most architecturally impressive fraternal lodge in Newfoundland and Labrador, utilizing many Classical Revival motifs, including pilasters, free-standing columns and multiple pediments. It also has the distinction of being the largest brick fraternal meeting hall in the province and as such is a fine example of brick and lime mortar construction. It holds a unique place in the architectural history of the province and stands as an important example of Victorian lodge construction. The interior is as equally impressive as the exterior, with detailed woodwork, decorative plaster and ornate ceiling details. The Masonic Temple has historic value due to its association with the Freemasons, an internationally known fraternal organization. Masons in Newfoundland received their first warrant in 1746. In St. John's, their first permanent home was located at Long's Hill. When this structure was destroyed by fire, plans were quickly drawn to construct a new building, the present Masonic Temple. Sir William Whiteway, longest serving prime minister of the colony of Newfoundland, laid the cornerstone of the new building on August 23, 1894. Masons who met at this location included many notable citizens, such as politicians and businessmen, who played significant roles in the political and economic growth of the developing colony. The Masonic Temple has cultural value as it is a physical reminder of a time when fraternal organizations played a significant role in the city of St. John's. Membership in such organizations was sought after by men of certain standing. Their pride in their affiliation with the Masons is reflected in the use of Masonic symbolism on both the interior and exterior of the Masonic Temple. From its commanding position, such symbolism speaks directly to Masons and indirectly to other citizens who may not know the exact meaning of the symbols but realize the associations with Freemasonary. Source: Heritage Foundation of Newfoundland and Labrador property file "St. John's – St. John's Masonic Temple – 1419".



## Character Defining Elements

All those design features reflective of the Classical Revival style, including: -three towers on front facade; -pediments on towers; -pilasters on towers; -transom windows on side towers; -columns and rounded arch on upper central tower; -pilasters and rounded arch on upper central tower; and, -heavy cornice belt course. All those features reflective of the age and construction of the building, including: -original roof type; -number of storeys; -brick exterior; -stone foundation; -sandstone detailing; -eaves brackets on centre tower -window materials, size, style, trim and placement; -size, style, trim and placement of exterior doors and their original, traditional materials; -use of decorative bronze; -entrance on centre front facade; and, -dimension, location and orientation of building; All those features reflective of Victorian-era Masonic Lodge construction, including: -one storey Corinthian columns and capitals with globes on main entrance; original interior woodwork, trim, detailing and plasterwork; -original main staircase; -Masonic symbols on centre tower; -wording "Masonic Temple" on centre tower; -plaque on left tower; -interior Masonic decoration and insignia; -repeated use of arch motif throughout the interior; -layout of the upper floor lodge rooms; and -original cornerstone

#### LOCATION AND HISTORY

Community
St. John's
Municipality
City of St. John's
Civic Address
006 Cathedral Street
Construction (circa)
19700101 - 19700101
Builder
Bohm
Style
Square

## 3.3 Brief History of the Masonic Temple

The Freemasons granted the first warrant for Newfoundland in 1746. They operated for well over a century without a dedicated lodge. In 1885, a lodge was built on Long's Hill, not far from the existing lodge on Cathedral St. The Long's Hill Lodge was destroyed in the great fire of 1892. The fire was particularly deadly and much of the city of St. John's was destroyed.

With the aid of the insurance money from the fire, a new lodge was constructed on Cathedral St. on the site of an earlier timber bungalow which was also lost in the fire. It was decided to construct the lodge using Accrington brick, which is known for its density and strength. The bricks were imported from Lancashire and some of the original pallets of brick that were not used up in the construction are still stored on site today.



The corner stone of the Masonic Temple was laid on the 23<sup>rd</sup> August, 1894 by Sir William Whiteway, former prime minister of Newfoundland. Construction work was completed in 1896 and the building was consecrated on the 23<sup>rd</sup> April, 1897.

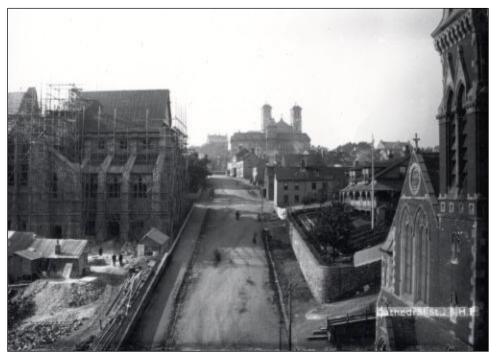


Figure 2 - Historic photograph showing an earlier timber bungalow on the site. (circa 1880)

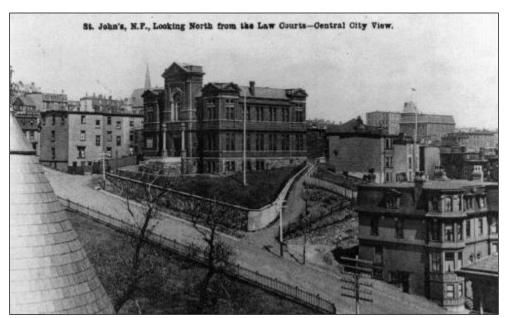


Figure 3 - Early 20th c photograph of the current Masonic Temple



## 4.0 Site and Building Survey and Assessment

The survey involved the visual inspection of each of the building and fabric elements within the site. The purpose of the inspection is to identify works required to make the building safe and to prevent further deterioration of the historic fabric. A more detailed assessment would be required to identify further works. The data sheet assesses the condition of each of the buildings into five categories as follows:-

- **Dangerous** Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public.
- Poor Health and safety issue. Urgent work required to prevent active deterioration of fabric, and safety of users/public
- Fair Necessary work needed. Work could be carried out at a later stage.
- **Good** There is no necessary work needed. Desirable work maybe carried out for aesthetic reasons or adaptive use.
- **Excellent** There is no work needed but item should be kept under observation.

Proposed works have been identified and these have been categorised into under five different headings:-

- **Immediate work** is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.
- **Urgent work** is that required to prevent active deterioration, i.e. attack by insect or fungus or penetration by rain water.
- **Necessary work** is that required to the 'standard' appropriate for the building and its present or proposed use in the context of the client's resources and includes items of preventive maintenance. This category can be subdivided into 'good housekeeping' 'rolling programme' and 'major works'.
- **Desirable work** is what is recommended to enhance the use or appearance of the building or what is necessary for re-evaluation or adaptive use of the building.
- **Items to be kept under observation** are, for example, active movements and roofs or installations that are nearing the end of their life and may need renewal within 10 or 15 years.



# **4.1** Survey and assessment of the Spirit of Newfoundland Building (former Masonic Temple)

**Date:** 28/05/2018 – 01/06/2018

**Building Number/Identity:** Spirit of Newfoundland Building (Former Masonic Temple)

Purpose of Visit: Conservation Engineering Survey and Assessment Report

**Stage of Works:** Survey

## **Structure Layout Sketch:-**

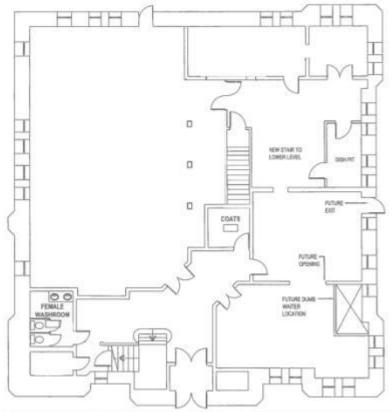


Figure 4 – J570 Spirit of Newfoundland Ground Floor Plan

## Notes:-

The structure was surveyed over the course of 5 days from the 28<sup>th</sup> May to the 1<sup>st</sup> June 2018 by Simon Collins, Martin English and David Humphreys of ACP. Weather conditions were wet and windy and severe at times. The following schedules set out the survey notes of the individual buildings/elements.

It must be noted that while minor opening up was carried out on walls, floors etc., that this report is based on a visual inspection only. We can only comment on those items which were both visible and accessible at the time of our inspection.

We can only comment on those items which were both visible and accessible at the time of our inspection.



## **4.2 Ground Floor (Internal Fabric)**

Building	Ground Floor
/Room ID	
General	Ground floor of the Masonic Temple building
Description	

#### **Condition Assessment:**

**Good** – There is no necessary work needed. Desirable work may be carried out for aesthetic reasons or adaptive use.

The ground floor of the building is in good condition from our initial visual inspection. No opening up work was carried out on the internal fabric of the ground floor due to the fact the area is used daily as a commercial space. The ground floor is made up of an impressive entrance lobby with many of the original features still extant. A large function room, kitchen and bar area make up the rest of the ground floor space.

There were no major issues highlighted during our inspection of the ground floor areas apart from one localised area of water ingress the cornice above the ground floor stairs landing. This affected area shows signs of salt penetration through the plaster work which is causing crumbling of the plaster cornice and peeling of the paint. This is likely due to water ingress to the front facade of the building which is in very poor condition due to failure of the outer brickwork and copper flashings of the concrete string course and parapet walls.

## Works Required:

**Desirable work** - is what is recommended to enhance the use or appearance of the building or what is necessary for re-evaluation or adaptive use of the building.

Recommended works to the ground floor are generally considered to be desirable in nature and will form a large part of the general maintenance and "good housekeeping" programme of a building of this age and construction type.

The localised area of water ingress above the ground floor stair landing is to be considered as necessary repair works to be carried out in the near future along with the necessary and urgent external repairs required to the front facade of the building.





Photo 1 - Ground Floor Lobby and Staircase



Photo 2 - Moisture Damage above stairs landing



## **4.3 First Floor (Internal Fabric)**

Building	First Floor
/Room ID	
General	First floor of the Masonic Temple building
Description	

#### **Condition Assessment:**

**Fair** – Necessary work needed. Work could be carried out at a later stage.

The first floor of the building is in a fair condition. The first floor consists of a long corridor, storage rooms and two large conference rooms which are referred to as the Red and Blue rooms. Both feature many of the original historic features including decorative plaster and timber work. The ceiling of the blue room shows signs of damage caused by water ingress however the source of the water ingress seems to have been stopped.

The first floor is currently only in use for storage purposes. Opening up works have been undertaken by the client by request of the City Council in relation to potential fire safety issues. The original raised timber platforms that were installed around the perimeter of the Blue room have been removed and the floor joists are left exposed.

Previous opening up works have been carried out in the blue room underneath one of the windows in the east corner of the building. A section of the lath and plaster has been removed to expose the inner wall and timber frame. Relieving arches have been constructed within the main walls beneath the windows. The thickness of the main walls varies at different points.

Within the opening can be seen metal ducting which forms part of the ventilation system. This pipe comes down from the attic space and turns to go through the first floor to a ceiling vent.

The walls of the Blue room have been insulated with modern insulated plaster boards fixed directly to the original lath and plaster finished with a modern skim coat.

No evidence of an internal downpipe was noted in this location.

The structural walls of the building are of brick and a cementuous lime mortar. A substantial timber frame has been constructed within the main wall envelope with an average distance of 200mm between the structural brick wall and the timber frame. The main roof trusses are sitting on top of the structural brick wall at eave level.



## **Works Required:**

**Necessary work** - is that required to the 'standard' appropriate for the building and its present or proposed use in the context of the client's resources and includes items of preventive maintenance. This category can be subdivided into 'good housekeeping' 'rolling programme' and 'major works'.

- Clearing out of the first floor to include the removal of unnecessary storage space to reduce load and make it easier for future inspections to the building fabric.
- Repair floor areas where original floorboards have been removed.
- Carry out repairs to the decorative ceiling in the Blue room to restore the original character of the curved ceiling.
- Removal of modern insulated plasterboard and replace with insulated lime based system.



Photo 3 - Previous opening up works below window in Blue room



Photo 4 - Decorative tiled floor in centre of Blue room





Photo 5 - First Floor opening showing modern plasterboard over original lath and plaster



Photo 6 - Insulated plasterboard fixed to original lath and plaster



## 4.4 Roof (External)

Building	External Roof Elements
/Room ID	
General	External roof fabric inspection
Description	

#### **Condition Assessment:**

**Poor -** Health and safety issue. Urgent work required to prevent active deterioration of fabric, and safety of users/public

The existing external roof covering is made up of a torch on felt material. The roof is sloped from three directions staring at the top of the parapet walls to divert rainwater to a single downpipe on the rear elevation. This appears to be as per the original design of the roof. The existing roof covering was installed approx. 10 years ago and replaced an earlier pitch and gravel roof covering. The existing felt covering is in generally good condition however many areas of failure were noted to the flashings at eave level and at the ridges of the hipped roof sections.

The roof features 3 no. hipped sections, one on the rear elevation and both side elevations. These hipped sections are finished with a modern felt slate which has failed in localised areas allowing water ingress. There is significant separation of the flashing and the felt covering evident on the south east elevation.

The copper flashing to the 3 no. towers of the front facade are in very poor condition. There are many instances of cracked joints and poor repair techniques that are leading to significant water ingress to the walls at eave level. Previous patch repairs sealed with mastic have failed in many instances. A modern sheet metal flashing has been installed in parts covering the ridge of the hipped roof sections.

The seal between the copper flashing and the modern felt roof covering is in very poor condition. The mastic sealant has failed in many areas and is allowing standing water on the seam and water ingress into the walls and roof structure.

The use of inappropriate fixings and steel mesh to hold back the failing brickwork of the facades is leading to significant staining of the copper in some areas. This is leading to bimetallic corrosion of the copper which is causing pitting to occur. In time these areas will lead to significant water ingress and complete failure of the copper flashings.

The copper vents on the roof which form part of the buildings ventilation system are in very poor condition. The base of the vents appears to be made up of the original copper while the upright shafts have been replaced in recent times with new copper. The use of inappropriate fixings is leading to the failure of the supporting straps and bi-metallic corrosion of the copper as well as staining from steel nails.

The central tower of the front elevation has been repaired in recent times with modern



corrugated steel sheeting. This sheeting is rusting and causing staining of the copper elements below. During our inspection it was noted that the central tower roof is serviced by an internal cast iron downpipe which is an original feature. Access to the top of this roof area for inspection was not possible. This roof section is finished with a modern torch on felt and installed to allow rain water to run off both sides of the roof.

The brick chimney on the rear elevation has been fitted with a modern extraction flue which is in very poor condition. The mild steel sheet cover has completely failed and is allowing significant water ingress into the chimney flue. The fixings to the base of the modern stainless steel flue have also failed and as such the top section of flue is loose.

## Works Required:

**Urgent work** - is that required to prevent active deterioration, i.e. attack by insect or fungus or penetration by rain water.

The roof of the building is overall in poor condition with many instances of potential water ingress and poor quality previous repairs. The majority of the modern felt covering is ok however there is significant failure of the roof covering around the perimeter of the roof at the flashings, chimneys and ridge of the hipped roof sections.

The following recommended works are to be considered as urgent necessary works to prevent further deterioration of the historic fabric and to prevent further water ingress into the building:

- Repair works to the copper flashings and decorative details of the roof.
- Removal of previous poor repairs such as mastics, sealants and inappropriate fixings such as non-galvanised or non-stainless steel nails and screws.
- A detailed inspection of the copper elements will be required to develop a scope of repairs and determine which sections require replacement to match existing.
- Repair all damaged or missing felt slates to the 3 no. hipped roof sections to match existing.
- Repair the seal between the modern felt roof covering and the copper flashings around the perimeter of the roof to prevent further water ingress. The copper flashings should be installed to return back over the roof, fixed and sealed to prevent further standing water on the seam.
- Removal of the steel mesh and fixings to the top of the front facades which are causing significant staining of the copper.
- Repair damaged fixings to the copper roof vents to match existing using appropriate materials such as copper nails and fixings.
- Repair/replace the corrugated metal sheeting to the central tower to prevent further
  deterioration of the copper below. In order to stop the rusting of the sheeting the
  metal will need to be cleaned down, primed and painted to match existing or
  replaced.
- Replace chimney cover to prevent further water ingress into the chimney flue.





Photo 7 - Damaged copper work and inappropriate repairs to side of tower on the NW elevation



Photo 8 - Inappropriate modern repairs to flashing on central tower of the front elevation.





Photo 9 - Failed copper patch repair to top of central tower



Photo 10 - Copper ventilation shaft. Note staining due to use of steel fixings.





Photo 11 - Base of chimney and rainwater gulley on Rear Elevation



Photo 12 - Top of chimney in very poor condition





Photo 13 - Modern felt roof covering in fair condition in need of localised repairs



Photo 14 - Failure of seal between roof cover and modern flashing





Photo 15 - Damaged and missing felt slates to hipped roof section on rear elevation



Photo 16 - Staining of copper from rusting corrugated sheeting cover on central tower



## 4.5 Roof (Internal)

Building	Attic
/Room ID	
General	Internal roof structure
Description	

## **Condition Assessment:**

**Poor -** Health and safety issue. Urgent work required to prevent active deterioration of fabric, and safety of users/public.

The internal roof structure of the building is made up of 4 large hipped parallel chord roof trusses with wrought iron upright supports. The trusses are resting on the main structural brick wall as well as structural timber beams of the internal timber frame of the building. The flat roof overhead is sloped on all sides towards the rear wall of the building. The attic space has been insulated with a loose blend of fibreglass insulation laid on a covering of plastic sheeting.

The roof joists supporting the flat roof are installed running perpendicular on top of the main trusses. The timber of the main roof structure is very large and generally in good condition with no major signs of active rot. Evidence of previous water ingress can be seen on the timbers in many places however these areas were dry at the time of inspection and the timber sound which suggests the source of the water penetration has been stopped.

The timber wall plate of the hipped roof sections is resting on the top of the main structural brick wall.

There is evidence of significant water ingress on the inside of the brick walls in the attic area particularly on the front elevation. This is likely due to localised failure of the copper flashings and roof covering.

A section of the wall on the rear elevation is in a very dangerous condition. A double chimney flue is present in this location which has previously been taken down to wall plate level. The wall top has started to lean out and has separated from the rafters of the hipped roof section. A length of masonry approx. 20m long is affected. This lean can be seen from the external elevation and is to be considered a serious health and safety risk and should be repaired immediately due to the risk of collapse.

## Works Required:

**Urgent work** - is that required to prevent active deterioration, i.e. attack by insect or fungus or penetration by rain water.

The internal roof structure and internal timber frame appear to be in good condition. There are however numerous issues within the attic space which need to be addressed and should be considered urgent works to prevent water ingress and in particular to prevent partial



collapse of the leaning section of the rear elevation wall at eave level.

The following recommended works are to be considered as urgent necessary works to prevent further deterioration of the historic fabric:

- Roof repair works highlighted in section 4.4 above are required to prevent further water ingress into the attic space. Evidence of water ingress is noted in localised area particularly to the front elevation of the building.
- Immediate repair of the leaning section of wall to the rear elevation. Temporary propping should be considered until full scope of repairs can be carried out. It is also recommended to clear the external area below the leaning section of wall at ground level in case of collapse. Propane tanks are located directly below which are at risk of damage if a collapse occurs.



Photo 17 - Evidence of water ingress on roof joists and timber frame



Photo 18 - Internal view of West corner of the building





Photo 19 - View of main roof trusses and modern insulation



Photo 20 – Significant active water ingress on hipped roof section of the Front Elevation





Photo 21 - Main roof truss and internal timber frame in good condition



Photo 22 - Water ingress at wall plate level of hipped roof section





Photo 23 - Leaning wall section of rear elevation. Note separation of the wall plate and previous modern repair works.



## 4.6 Copper Work

Building	External Copper Work
/Room ID	
General	Decorative and functional external copper elements
Description	

#### **Condition Assessment:**

**Poor -** Health and safety issue. Urgent work required to prevent active deterioration of fabric, and safety of users/public.

Copper has been used extensively on the Spirit of Newfoundland building both as decorative elements on the front facade and as flashings and fascia and soffit coverings. The original copper work is of a high quality of workmanship but due to lack of maintenance and exposure to extreme conditions it is in very poor condition overall. The natural patina of the original copper is well developed and evenly spread.

The use of inappropriate repairs and sealants has lead to the deterioration of much of the copper work particularly on the front facade of the building. There are many instances of cracking of the copper due to constant wind and the failure of fixings. Many of the joints of the copper work have been covered with modern mastic sealant. The copper soffits show signs of corrosion possibly due to trapped water underneath.

The decorative copper panels on the central tower of the front façade are in very poor condition. A large section of one of the panels has come away due to recent storm damage. The timber frame behind is also in poor condition due to water ingress and exposure to the elements.

The three main decorative copper panels on the front façade are in various states of repair. The uppermost decorative panel was not directly accessible at the time of inspection but appears to be in a fair condition from ground level. They will all require significant repair works in order to ensure no further deterioration occurs. Modern mastic and sealant repairs should be removed and appropriate fixings installed as necessary.

The copper flashings on top of the concrete string course are in a fair condition. The joints have been sealed with mastic in many places. The flashings have failed in localised areas due to failure of the joints which have been exacerbated by wind lifting the copper sheeting.

A full detailed assessment of the copper work is required once the building is fully scaffolded in order to determine a full scope of repair works.



## **Works Required:**

**Urgent work** - is that required to prevent active deterioration, i.e. attack by insect or fungus or penetration by rain water.

Due to the poor condition of the copper work the following works should be considered as urgent works to prevent further deterioration of the copper and to prevent further water ingress into the building fabric and walls:

- Removal of the middle decorative copper panel to prevent further tearing or complete displacement of the panel. This could easily come away given strong enough winds and would be a serious health and safety concern.
- Repair or replace as necessary the timber formwork behind the damaged decorative copper panel.
- Repair of any cracks, cracked welts, separation of joints as necessary using appropriate methods and materials.
- Removal of modern mastic repairs and replace with solder or brazing as necessary.
- Removal of all inappropriate modern repairs including steel fixings, mastic and silicon.
- Opening up works to be carried out including removal of sections of the copper fascia and soffits to assess condition of timber underneath. Inspection of timber formwork behind the 3 no. decorative panels.
- Full detailed inspection of the copper elements to determine full scope of repairs required.

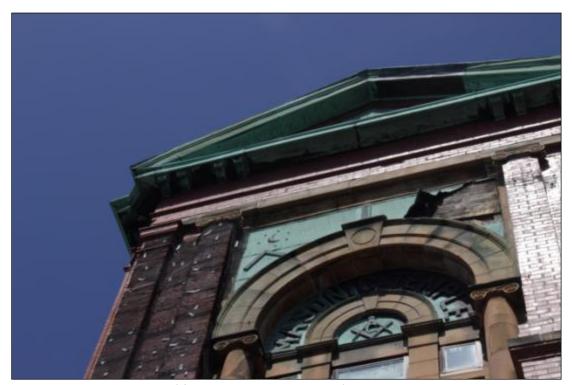


Photo 24 - Damaged central decorative copper panel





Photo 25 - Modern patch repair to top fascia and soffit of central tower



Photo 26 - Modern mastic repairs to joints of copper work





Photo 27 - Lower decorative panels in need of remedial works

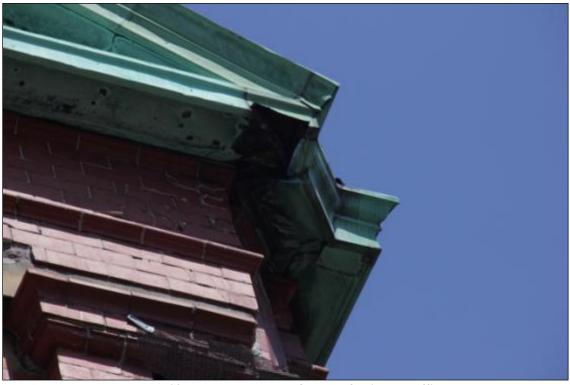


Photo 28 - Damaged corner of copper fascia and soffit



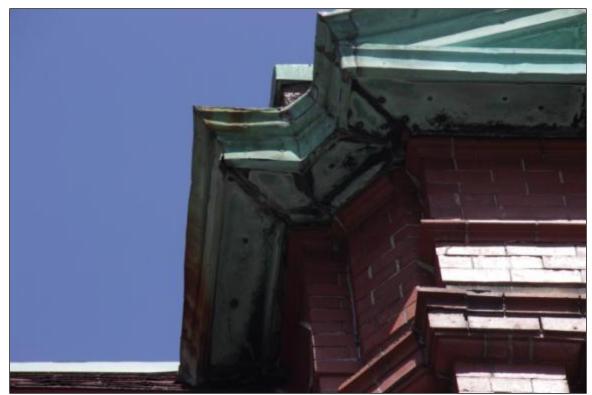


Photo 29 - Bi-metallic staining and evidence of corrosion of the copper on corner of central tower



#### 4.7 External Elevations: South Western Elevation

Building	South West Elevation facing onto Cathedral Street.
/Room ID	
General	External façade of building finished with red brick laid in stretcher bond with
Description	architectural features finished in sandstone around entrance to building, plaque to frond of building and window cills and window heads. Concrete Cornice string course around entire building at storey levels.

#### **Condition Assessment:**

**Dangerous** – Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public.

The brickwork to the SW elevation of The Masonic Lodge is in very poor repair. The brickwork was inspected at various heights by the front entrance of the building. It is noted that the current intervention, whereby a wire netting has been crudely attached to the masonry in various places throughout the front façade, is unsatisfactory and may fail at any time.

It is evident that previously the masonry has been replaced in panels throughout the façade. It is also noted that inappropriate patch repairs, where materials not suitable for purpose were used to fill in failed joints, patch up cracks to window heads and cornice and architectural features to the façade. Materials such as Cementitious Mortar, silicone and mastic sealer were noted, along with new masonry brick panels constructed with a cementituous mortar.

## **Works Required:**

**Immediate work -** is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.

A thorough detailed inspection of all the masonry to the façade of the building will need to be undertaken in order to determine the full scope of works required. The brick panels where the wire netting is in place will need complete replacement. It is noted that the brick masonry units have spalled and broken down, with many of the units ready to fall away from the wall. The concrete cornice string course will require closer examination across the whole façade.

- Erection of substantial structural scaffolding to the façade, capable of taking loading for dismantling and rebuilding brick masonry panels. This scaffold may be also required to support loading from the panels locally.
- Removal of failed brick masonry panels and replacement with brick masonry units



(Size, texture and colour to match existing), laid to the same gauge as the original brick courses using a Natural Hydraulic Lime based mortar.

- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location.
- Pinning of failed stone masonry where required.
- Removal of weak and failed mortar to the joints of the brickwork.
- Application of brick joint reinforcement measures.
- Application of brick tie through to backing masonry to replace failed/missing or nonexistent wall ties (The brick is laid in a stretcher bond throughout, lead ties were found on the North West Façade exploratory opening up works).
- Application of a Natural Hydraulic Lime based mortar pointing to the brickwork where required on completion of the afore mentioned works.

The following works are to be considered as desirable where by the undertaking of same is to enhance the appearance of the building on the context of its historical significance or standing:

• Removal of inappropriate brick panel and replacement with bricks to match the original, laid in a Natural Hydraulic Lime based mortar, gauged to match existing brick coursing.



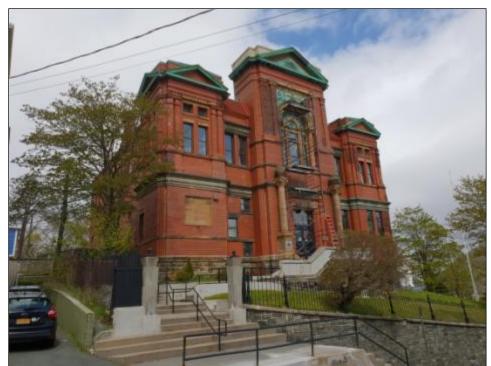


Photo 30 View of South Western Façade on the 1st day of the inspection



Photo 31 - View of netting to brickwork





Photo 32 - View of badly deteriorated sandstone panel with inappropriate brick replacement surround.



Photo 33 - View of sand stone unit with failure through joints and inappropriate interventions.





Photo 34 - View of corbel string course with various previous interventions on view.

### 4.8 External Elevations: North Western Elevation

Building	North West Elevation (Gower Street).
/Room ID	
General	External façade of building finished with red brick laid in stretcher bond with
Description	architectural features finished in sandstone, window cills and window heads.
_	Concrete Cornice string course around entire building at storey levels.

#### **Condition Assessment:**

**Dangerous** – Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public. At corner of building at NW/SW.

The brickwork and stone lintels at the south west/northwest corner on the north west façade are in poor repair. On investigation it was discovered that the brickwork panel here has separated from the internal backing brickwork. Evidence of ties (lead strips) to the backing masonry was discovered. These ties were noted to have failed. The outer facing leaf of brickwork has progressively peeled away from the backing masonry and is in danger of failure.

A number of the sandstone window heads have also failed. Full height cracks are evident on



the surface of the lintels tracking back from the brickworks reveals at the head of the lintel. A second lintel exhibits a central crack on the face of the sandstone masonry unit.

As with the SW façade it is evident that previously the masonry has been replaced in panels throughout the façade. It is also noted that inappropriate patch repairs, where materials not suitable for purpose were used to fill in failed joints, patch up cracks to window heads and cornice and architectural features to the façade. Materials such as Cementitious Mortar, silicone and mastic sealer were noted, along with new masonry brick panels constructed with a cementituous mortar.

# Works Required:

**Immediate work -** is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.

As per the SW façade, a thorough detailed inspection of all the masonry to the façade of the building will need to be undertaken in order to determine the full scope of works required. The concrete cornice string course will require closer examination across the whole façade.

The following recommended works are to be considered as immediate works required to prevent further deterioration of the historic fabric and to protect the building and its users:

- Erection of substantial structural scaffolding to the façade, capable of taking loading for dismantling and rebuilding brick masonry panels. This scaffold may be also required to support loading from the panels locally. Primarily to the NW/SW corner.
- Removal of failed brick masonry panels and replacement with brick masonry units (Size, texture and colour to match existing), laid to the same gauge as the original brick courses using a Natural Hydraulic Lime based mortar.
- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location.
- Pinning of failed stone masonry where required.
- Where necessary, replacement of failed stone masonry units with new units, finished to match existing.
- Removal of weak and failed mortar to the joints of the brickwork.
- Application of brick joint reinforcement measures.
- Application of brick tie through to backing masonry to replace failed/missing or nonexistent wall ties (The brick is laid in a stretcher bond throughout, lead ties were found on the North West Façade exploratory opening up works).
- Application of a Natural Hydraulic Lime based mortar pointing to the brickwork where required on completion of the afore mentioned works.

The following works are to be considered as desirable where by the undertaking of same is to enhance the appearance of the building on the context of its historical significance or standing:



• Removal of inappropriate brick panel and replacement with bricks to match the original, laid in a Natural Hydraulic Lime based mortar, gauged to match existing brick coursing.



Photo 35 - View of North Western Façade





Photo 36 - View of various openings with vertical crack on view to lintel to central foreground of photograph



Photo 37 - Crack to lintel at NW/SW corner.





Photo 38 - Exploratory opening in outer brick leaf. Inset; View of Lead tie.



#### 4.9 External Elevations: North Eastern Elevation

Building	North Eastern Elevation, facing onto Willcott's Lane.
/Room ID	
General	External façade of building finished with red brick laid in stretcher bond with
Description	architectural features finished in sandstone, window cills and window heads.
	Concrete Cornice string course around entire building at storey levels. There
	are extensive services present on this façade of the building.

#### **Condition Assessment:**

**Dangerous** – Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public. Central section of masonry, approximately twenty meters in length at eaves.

It is noted that the brickwork at eaves, for approximately twenty meters exhibits signs of failure. This was confirmed within the roof space on further investigation. The masonry was found to leaning outwards, away from the backing masonry by as much as 150mm in places. This section of masonry is being held in place, for the most part by the roof structure.

Plant has been attached to the brickwork externally in several places, which may present issues going forward, particularly where the lintels have been used as the primary load bearing element to take the extra weight of this plant. It is noted that the escape stairs was also crudely installed, with much of the brickworks failed or damaged as a result of the installation and subsequent deterioration of the escape stairs down through the years.

It is noted that inappropriate patch repairs, where materials not suitable for purpose were used to fill in failed joints, patch up cracks to window heads and cornice and architectural features to the façade, as evidenced on the remaining facades. Materials such as Cementitious Mortar, silicone and mastic sealer were noted, along with new masonry brick panels constructed with a cementituous mortar.

#### **Works Required:**

**Immediate work -** *is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.* 

The interventions required on the North Eastern Façade represent the most serious observed in the subject building. The masonry in danger of collapse is at a high level, overlooking Willcott's Lane to the rear of the building. There are also gas tanks on ground level directly below this masonry. This item needs to be attended to in earnest.

As per the all façades, a thorough detailed inspection of all the masonry to the façade of the building will need to be undertaken in order to determine the full scope of works required. The concrete cornice string course will require closer examination across the whole façade.



The following recommended works are to be considered as immediate works required to prevent further deterioration of the historic fabric and to protect the building and its users:

- Erection of substantial structural scaffolding to the façade, capable of taking loading for dismantling and rebuilding brick masonry panels. This scaffold may be also required to support loading from the panels locally. Primarily to the NW/SW corner.
- Removal of hipped roof plane covering at the North Eastern Façade.
- Dismantling of failed brick masonry at eaves as required, salvaging as much of the brickwork for reuse as is practical.
- Rebuilding of brickwork to eaves using a Natural Hydraulic Lime based mortar.
- Replacement brick masonry units to match missing /failed bricks (Size, texture and colour to match existing), laid to the same gauge as the original brick courses using a Natural Hydraulic Lime based mortar.
- Necessary repair/alteration to roof structure of North Eastern Roof plane, replacement of roof covering and necessary flashing and counter flashing.
- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location.
- Pinning of failed stone masonry where required.
- Where necessary, replacement of failed stone masonry units with new units, finished to match existing.
- Removal of weak and failed mortar to the joints of the brickwork.
- Application of brick joint reinforcement measures.
- Application of brick tie through to backing masonry to replace failed/missing or nonexistent wall ties (The brick is laid in a stretcher bond throughout, lead ties were found on the North West Façade exploratory opening up works).
- Application of a Natural Hydraulic Lime based mortar pointing to the brickwork where required on completion of the afore mentioned works.

The following works are to be considered as desirable where by the undertaking of same is to enhance the appearance of the building on the context of its historical significance or standing:

• Removal of inappropriate brick panel and replacement with bricks to match the original, laid in a Natural Hydraulic Lime based mortar, gauged to match existing brick coursing, if applicable.





Photo 39 - View of North Eastern Façade



Photo 40 - View of eaves of North Eastern facade with masonry leaning outwards on the corbel courses





Photo 41 - View from below leaning masonry



Photo 42 - Internal view of failed brickwork at eaves





Photo 43 - Flammable gas tanks beneath the failed masonry.



#### 4.10 External Elevations: South Eastern Elevation

Building	South Eastern Elevation.
/Room ID	
General	External façade of building finished with red brick laid in stretcher bond with
Description	architectural features finished in sandstone, window cills and window heads.
_	Concrete Cornice string course around entire building at storey levels.

# **Condition Assessment:**

**Dangerous** – Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public. Central section of masonry, approximately twenty meters in length at eaves.

On this elevation, there are several large sections of brickwork exhibiting unit failure, where the individual bricks are crumbling under compressive forces. On the upper storey level, the brickwork panels between the openings are leaning outwards at the cill level. Exploratory investigative opening up works at this level shows masonry falling down the cavity internally, which may be contributing to the wall "bellying" outwards at storey level.

Examination of the concrete cornicing string course on this façade showed up weathering of the surface of the concrete, with the steel reinforcement exposure evident throughout.

It is noted that inappropriate patch repairs, where materials not suitable for purpose were used to fill in failed joints, patch up cracks to window heads and cornice and architectural features to the façade, as evidenced on the remaining facades. Materials such as Cementitious Mortar, silicone and mastic sealer were noted, along with new masonry brick panels constructed with a cementituous mortar.

# **Works Required:**

**Immediate work -** is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.

The brickwork panels at storey level, where extensive failure has occurred, require replacement in full. The brick units have crumbled under the compressive force of the stringcourse and possible failure of the tie in to the backing masonry. Remaining isolated panels of brickwork, which exhibit similar traits as the storey level panels will also require replacement.

As per the all façades, a thorough detailed inspection of all the masonry to the façade of the building will need to be undertaken in order to determine the full scope of works required. The concrete cornice string course will require closer examination across the whole façade.



- Erection of substantial structural scaffolding to the façade, capable of taking loading for dismantling and rebuilding brick masonry panels. This scaffold may be also required to support loading from the panels locally. Primarily at second storey level.
- Dismantling of failed brick masonry required, salvaging as much of the brickwork for reuse as is practical.
- Rebuilding of brickwork to using a Natural Hydraulic Lime based mortar.
- Replacement brick masonry units to match missing /failed bricks (Size, texture and colour to match existing), laid to the same gauge as the original brick courses using a Natural Hydraulic Lime based mortar.
- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location.
- Carry out necessary remedial repairs to the string course where the steel reinforcement has been exposed and to the surface of the concrete where the finish has degraded and weathered.
- Pinning of failed stone masonry where required.
- Where necessary, replacement of failed stone masonry units with new units, finished to match existing.
- Removal of weak and failed mortar to the joints of the brickwork.
- Application of brick joint reinforcement measures.
- Application of brick tie through to backing masonry to replace failed/missing or nonexistent wall ties (The brick is laid in a stretcher bond throughout, lead ties were found on the North West Façade exploratory opening up works).
- Application of a Natural Hydraulic Lime based mortar pointing to the brickwork where required on completion of the afore mentioned work.





Photo 44 - View of South Eastern Façade



**Photo 45 - South Eastern Facade at Eaves** 





Photo 46 - View of top of cornice string course at storey level. Fabric and flashing in poor repair.

Inset spalling of concrete surface with steel reinforcement exposed.



Photo 47 - View of crumbling brickwork to brick panel.





Photo 48 - View of exploratory opening up. Inset; view inside cavity with fallen masonry evident to the middle foreground.



# 4.11 External Elevations: South West Elevations: Retaining walls

Building	South West Elevations: Retaining walls facing onto Cathedral Street.
/Room ID	
General	Wall located at front door entrance, retaining the landing constructed of
Description	coursed sandstone.
_	

#### **Condition Assessment: Wall at front entrance**

**Dangerous** – Serious health and safety issue. Immediate work required to be carried out for the safety of the fabric and users/public.

The wall located to the front entrance is in poor repair. The fabric is actively deteriorating, with masonry units having come away from the wall surface. The stone itself, a sandstone, is failing in places due to ongoing water ingress to the fabric behind, with the decay being accelerated in part by the presence of an inappropriate cementituous mortar.

Observations of the wall over points in time (Google Street View), demonstrated through the desktop study, show photographs of the wall in various states of repair with the interventions showing in the most recent photographs, show that inappropriate repairs have been ongoing for quite some time.

# **Works Required:**

**Immediate work -** *is what must be done straight away to deal with work necessary for the safety of the fabric and/or its users.* 

An inspection of the existing masonry units in full will be required to schedule out the required number of replacements for the masonry units, given the condition of the noted failed masonry units on site, which exhibit signs of severe weathering.

The missing masonry units are to be reinstated, laid in place using a Natural Hydraulic Lime based mortar. The inappropriate pointing present to the remainder of the wall is to be raked out and replaced with a Natural Hydraulic Lime based mortar. The weep holes are to be retained.

It is desirable that the render to the plinth wall atop the retaining wall be investigated to determine the wall construction and consider the removal of same, if deemed necessary.

- Dismantling of failed masonry at as required, salvaging as much for reuse as is practical.
- Rebuilding of masonry using a Natural Hydraulic Lime based mortar.
- Replacement masonry units to match missing /failed bricks (Size, texture and colour



- to match existing), laid to the same gauge as the original courses using a Natural Hydraulic Lime based mortar.
- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location where stipulated.
- Pinning of failed stone masonry where required.
- Where necessary, replacement of failed stone masonry units with new units, finished to match existing.
- Removal of weak and failed mortar to the joints of the masonry.
- Application of joint reinforcement measures if deemed necessary.
- Application of tie through to backing masonry if found necessary.
- Application of a Natural Hydraulic Lime based mortar pointing to the masonry where required on completion of the afore mentioned works.



Photo 49 - View of deterioration of masonry of retaining wall to front of entrance





Photo 50 - View of deterioration of masonry of retaining wall to front of entrance

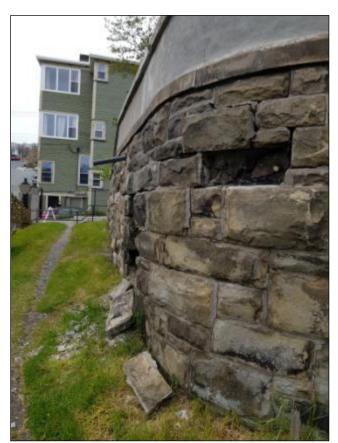


Photo 51 - View of deterioration of masonry of retaining wall to front of entrance.



## 4.12 External Elevations: South West Elevations: Retaining walls

Building	South West Elevations: Retaining walls facing onto Cathedral Street.
/Room ID	
General	Wall located to front boundary of the site constructed of coursed limestone.
Description	

Condition Assessment: Wall facing onto Cathedral Street.

**Fair** – Necessary work needed. Work could be carried out at a later stage.

The retaining wall abounding Cathedral Street is noted to be in fair condition. The wall structurally exhibits no obvious patent defects. It is however noted that inappropriate strap pointing using a cementituous mortar has been applied to the joints of the masonry.

Observations of the wall over points in time (Google Street View), demonstrated through the desktop study, show photographs of the wall in various states of repair with the interventions showing in the most recent photographs, show that inappropriate repairs have been present for quite some time.

# **Works Required:**

**Necessary work -** is that required to the 'standard' appropriate for the building and its present or proposed use in the context of the client's resources and includes items of preventive maintenance. This category can be subdivided into 'good housekeeping' 'rolling programme' and 'major works'.

- Removal of cementituous mortar pointing interventions, mastic and silicone interventions.
- Repair of failed masonry units using a Natural Hydraulic Lime based stone repair and restoration mortar and or stone indent repairs, dependant on the severity of the failure and size/location where stipulated.
- Pinning of failed stone masonry where required.
- Where necessary, replacement of failed stone masonry units with new units, finished to match existing.
- Removal of weak and failed mortar to the joints of the masonry.
- Application of joint reinforcement measures if deemed necessary.
- Application of tie through to backing masonry if found necessary.
- Application of a Natural Hydraulic Lime based mortar pointing to the masonry where required on completion of the afore mentioned works.



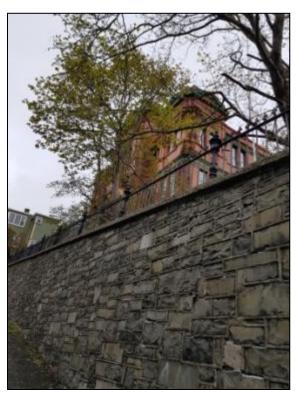


Photo 52 - View of boundary retaining wall facing onto Cathedral Street.

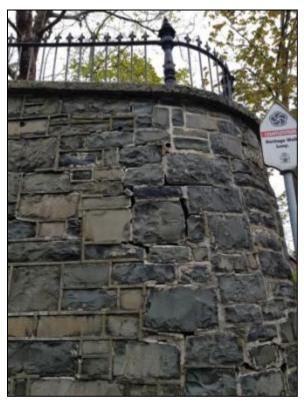


Photo 53 - View of deterioration of cementituous pointing to corner of retaining wall.





Photo 54 - Google Street view captures from May 2018 (Main) and May 2013 (Inset) illustrating the deterioration of the cementituous pointing applications over time.



## **5.0 Conclusion and Recommendations**

The Spirit of Newfoundland Building (former Masonic Temple) is a very unique late 19<sup>th</sup> c structure. The method of construction incorporating structural masonry brick walls with a substantial internal timber frame is very impressive.

While the interior of the building is in relatively good condition and retains much of the original character, the external walls and roof elements are in very poor condition and require immediate intervention to prevent further deterioration of the historic fabric.

Generally in "4.0 Site and Building Survey and Assessment" above, the items marked "Immediate" are required to be attended to straight away to ensure the preservation of the building and its fabric and to stave off any further decay of the buildings fabric.

The items marked "Urgent" is that required to prevent active deterioration, i.e. attack by insect or fungus or penetration by rain water.

The items marked "Necessary" and "Desirable" are to be revisited during the feasibility stage of the project where a determination should be arrived at as to whether works are required to these items.

## 5.1 Summary

#### **Immediate items**

In summary the items which presents the greatest danger, on the North East Elevation, as described in "4.9 External Elevations: North Eastern Elevation" above is the brickwork at eaves which is in danger of imminent failure.

Further to this the brickwork to the front façade described in "4.7 External Elevations: South Western Elevation" above and NW/SW corner are also in need of immediate attention, giving its proximity to the users of the building and the public roads.

The masonry on the remaining elevations described in "4.8 External Elevations: North Western Elevation" and "4.10 External Elevations: South Eastern Elevation" also requires works which can be described as immediate in nature.

#### **Urgent Items**

The roof as described in "4.4 Roof (External)" above requires works in the near future in order to negate the impact of the continuous water ingress evident during the inspection of the building, observed within the roof space and of which the source of same was noted on the external examination of the roof fabric and finishes.

The items described above will need to be addressed in order of their seriousness, e.g. the danger they represent to users of the building, the public, and the fabric of the building and surrounding structures should failure occur, as envisaged.



#### **5.1 Recommendations**

The items as described in this report as "Immediate" and "Urgent" will need to be addressed in the near future, particularly the North East Elevation. Significant structural scaffolding, E.g. scaffolding designed by a engineer specializing in scaffolding structures which can be used for loading out, and provide minor support to structural elements of the building during the course of works to the external fabric of the building.

Generally the following is also recommended:

- Measured Survey of the Building and Site.
- Archival Photographic Record of the building and site.
- A maintenance plan for the building.
- Prepare a Conservation Management Plan which will guide the current owners when it comes to managing and developing the building and site.
- All proposed development to the building and site should be undertaken
  following consultation with a suitably qualified and competent professional in
  Architectural Conservation and works thereafter undertaken under supervision of
  same.



# 6.0 Signing off statement

# **Conservation Company:**

ACP Archcon Professionals Limited. (Registration No: 591604). Trading as ACP.

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**Client:** Kathie Hicks (Spirit of Newfoundland)

Signed: \_\_\_\_\_

For ACP Archcon Professionals Limited.

**Dated:** 3<sup>rd</sup> July 2018



# 7.0 Project References

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

http://australia.icomos.org/

Google Maps

https://www.google.com/maps

Heritage Foundation Newfoundland and Labrador

http://heritagefoundation.ca/





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